

Name _____

Can We See Black Holes, or Are They Invisible?

Open-Ended Response Questions

1. Imagine you are an astronomer studying a distant star system. You observe the motion of nearby stars and notice irregular orbits. How might you determine if there is a black hole in this star system, and what characteristics of the black hole could you infer from your observations?
2. Discuss the potential future developments in the field of black hole observation and research. How might technology and scientific advancements further our understanding of these mysterious objects?
3. Explain to a younger sibling or friend why black holes are not actually "holes" in space but rather extremely dense regions. Use simple and relatable examples to illustrate your point.
4. Consider the emotional and scientific impact of capturing an image of a black hole for the first time in history. How does such an achievement contribute to our exploration of the universe and our understanding of fundamental physics?

